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Before the  
FEDERAL COMMUNICATIONS COMMISSION  
Washington, DC 20554

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FEDERAL COMMUNICATIONS COMMISSION  
OFFICE OF THE SECRETARY

In the Matter of )

Replacement of Part 90 by Part 88 to )  
Revise the Private Land Mobile Radio )  
Services and Modify the Policies )  
Governing Them )

PR Docket No. 92-235

ORIGINAL

SUPPLEMENTAL COMMENTS  
of the LAND MOBILE COMMUNICATIONS COUNCIL  
on  
PETITIONS FOR RECONSIDERATION  
of the SECOND REPORT AND ORDER

Respectfully submitted,

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July 22, 1998

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1. The Land Mobile Communications Council ("LMCC"), pursuant to Section 1.429 of the Rules and Regulations of the Federal Communications Commission ("FCC", "the Commission"), 47 C.F.R. §1.429, respectfully submits these Supplemental Comments on the Petitions for Reconsideration of the *Second Report and Order* in the above-referenced proceeding (the "refarming" proceeding).<sup>1</sup> These comments deal specifically with the rules promulgated in the 2<sup>nd</sup> R&O to encourage trunked radio systems in the 450-512 MHz frequency band.

2. After extensive work within the land mobile radio industry, it has been determined that revision of these rules is needed to accomplish the Commission's goal in this proceeding. The LMCC herein offers its recommendations, a consensus of the industry and the frequency coordinators responsible for assigning these channels, on revisions needed to foster the efficiencies of trunked systems.<sup>2</sup> To the extent these proposed revisions conflict with positions included in petitions for reconsideration earlier filed by the parties named in these Supplemental Comments, the parties request the withdrawal of only the conflicting portions of their petitions for reconsideration.

## **I. Introduction**

3. The LMCC is a non-profit association of organizations representing virtually all

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<sup>1</sup> *Second Report and Order*, PR Docket No. 92-235, 12 FCC Rcd 14307 (1997) ("2nd R&O").

<sup>2</sup> The LMCC notes that it has sought clarification of some portions of the trunking provisions in a letter to the Wireless Telecommunications Bureau that would not require amendment of the Rules. The recommended revisions contained herein are designed to harmonize with the "IG/YG" class codes and other measures included in the letter. See, Letter to Dan Phythyon, Wireless Telecommunications Bureau Chief, from Larry Miller, March 17, 1998 ("Clarification Letter").

users of land mobile radio systems, providers of land mobile services, and manufacturers of land mobile radio equipment. The LMCC acts with the consensus, and on behalf, of the vast majority of public safety, business, industrial, private, commercial and land transportation radio users on several frequency bands regulated by the FCC.

4. Key to these operations are those bands included in the refarming proceeding. LMCC has been an active participant in all phases of this complex and extended proceeding; the efficient use of the refarmed bands is of paramount importance to the LMCC and its members. Membership includes the following organizations:<sup>3</sup>

- Affiliated American Railroads (AAR)
- ARINC, Inc.
- American Association of State Highway and Transportation Officials (AASHTO)
- American Automobile Association (AAA)
- American Mobile Telecommunications Association, Inc. (AMTA)
- American Petroleum Institute (API)
- American Trucking Associations, Inc. (ATA)
- Association of Public Safety Communications Officials-International, Inc. (APCO)
- Forest Industries Telecommunications (FIT)
- Forestry-Conservation Communications Association (FCCA)
- Industrial Telecommunications Association, Inc. (ITA)
- Intelligent Transportation Society of America, Inc. (ITSA)
- International Association of Fire Chiefs (IAFC)
- International Association of Fish and Wildlife Agencies (IAFWA)
- International Municipal Signal Association (IMSA)
- International Taxicab and Livery Association (ITLA)
- Manufacturers Radio Frequency Advisory Committee (MRFAC)
- National Association of State Foresters (NASF)
- Personal Communications Industry Association (PCIA)

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<sup>3</sup> LMCC member organizations AAA, IMSA, and FIT, do not support the filing of these supplemental comments. AAA expressed a reservation that trunked systems will cause interference to AAA's simplex systems, and that the proposed contour studies will be insufficient to prevent such interference. FIT objects to the proposed "flagging" of channels but is otherwise supportive of these comments.

- Telecommunications Industry Association (TIA)
- UTC, the Telecommunications Association (UTC)

## **II. Background**

5. In initiating the refarming proceeding, the FCC has sought to optimize the use of the private land mobile radio bands. Various portions of this complex proceeding have focused on differing aspects of regulating the frequency bands between 150 MHz and 512 MHz.

6. In its initial decision in the docket, the FCC created a new channelization scheme for relevant frequency bands, designed to move users gradually from the current 25 kHz or 30 kHz primary channels to narrower, more efficient 12.5/15 kHz, and eventually, 6.25/7.5 kHz channels. However, rather than imposing a deadline for migration to narrower frequencies, the FCC elected to encourage narrowband through its equipment type-acceptance process.<sup>4</sup>

7. In the 2<sup>nd</sup> R&O, the Commission sought to consolidate the twenty private radio services to use more efficiently the channels allocated to each service, and to introduce competitive frequency coordination. In furtherance of its goal of increased spectrum efficiency, and in response to industry requests, the FCC also composed rules for “centralized” trunked systems on bands below 800 MHz.

8. It has long been the policy of the Wireless Telecommunications Bureau, and formerly the Private Radio Bureau, to permit “decentralized” trunking on private land

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<sup>4</sup> See generally, *Report and Order and Further Notice of Proposed Rule Making*, PR Docket No. 92-235, 10 FCC Rcd 10076 (1995).

mobile bands. In such systems, channels are combined into more efficient, trunked systems in which equipment seeks the next available channel to complete a transmission; however, the equipment monitors channels prior to initiating transmissions to avoid co-channel interference. Moreover, frequencies continue to be shared: the presence of a decentralized trunked system does not preclude additional licensing of the channels involved to other licensees within the system's licensed coverage area.<sup>5</sup>

9. By contrast, the 2<sup>nd</sup> R&O sought to introduce centralized trunking, in which no monitoring is required prior to transmission. To protect the viability of the trunked system, the FCC provided that subsequent applicants for channels included in a trunked system within the system's service area must reach a mutual agreement with the trunked operator.<sup>6</sup> However, to obtain a license for a centralized trunked system, the Commission imposed extensive requirements upon applicants to obtain consent to the proposed system from co-channel and adjacent channel licensees.<sup>7</sup>

### **III. Discussion**

10. The LMCC and its members applaud the FCC for its decision to permit centralized trunking on the refarmed bands, and its efforts to create rules for trunking that will minimize harmful interference to existing users. As the chief users of these bands, the LMCC has

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<sup>5</sup> The LMCC has sought clarification from the FCC that this definition accurately represents its policy concerning decentralized trunking. *See*, Clarification Letter.

<sup>6</sup> 2<sup>nd</sup> R&O at ¶¶ 56-59; 47 C.F.R. § 90.187(b)(2)(iii).

<sup>7</sup> 47 C.F.R. § 90.187(b)(2)(ii, iii)

identified portions of the Rules requiring revision to better implement these systems in line with FCC goals of improving spectrum efficiency. The organization seeks to conserve valuable FCC time and resources by consolidating the positions of several petitioners to arrive at an industry consensus for a reasonable and technically viable solution to the problem.

11. Of primary concern among the various bands included in the refarming proceeding is 450-470 MHz, where paired channels exist that can facilitate trunked systems, but channel sharing necessitates a framework of rules such as the Commission has provided. Thus far, however, in spite of substantial industry interest in creating centralized trunked systems, the system isn't working. In the more than eight months since the trunking rules became effective, the several frequency coordinators working in these bands have been able to certify and refer to the Commission fewer than twenty applications for centralized trunked systems. Anticipating the difficulty, several LMCC members, and the organization as a whole, have conducted lengthy discussions to arrive at a consensus on changes needed to improve the outlook for such systems. In furtherance of the common goal of spectrum efficiency, the LMCC offers the following recommendations.

**A. Consent Requirements for Centralized Trunked Systems Should be Based on System Contours After an Engineering Analysis.**

12. To best avoid harmful interference between facilities, the LMCC recommends that the area in which consent is required be keyed to the actual service area of the proposed base station, based on power, antenna height and terrain. This is best accomplished

through utilizing a contour analysis, rather than basing the need for consent on a fixed distance from the proposed station's coordinates.

13. The LMCC concurs fully with the FCC's concern that centralized trunked systems not cause harmful interference to co-channel and adjacent-channel stations. However, the current standard, requiring consent from all stations "with service areas . . . that overlap a circle with radius 113 km (70 mi.) from the proposed base station. . . ."<sup>8</sup> is excessive. With a normal service area extending approximately 30-35 miles from the base station coordinates, the geography in which consents currently must be obtained is far larger than the area in which interference could possibly occur. With the addition of stations whose signals may intersect the 70-mile circle, the full area of consent potentially extends 100 miles or more in any direction. Beyond requiring consent from stations with no possible interest in the service area of the trunked station, the net effect of the current requirement is to make the trunked station simply impossible to attain, especially in urban areas.

14. The recognized service area for a station in the 450-470 MHz band is considered to be its 39 dBu contour. Therefore, to adequately protect existing stations, the LMCC recommends that applicants proposing centralized trunked systems be required to obtain consent from existing co-channel and adjacent channel stations whose 39 dBu service contour intersects the proposed station's 21 dBu interference contour.<sup>9</sup> As an outside limit,

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<sup>8</sup> 47 C.F.R. § 90.187(b)(2)(ii).

<sup>9</sup> Coordinators in the Public Safety Pool observe an interference contour of 19 dBu in the UHF band. Thus, applicants proposing centralized trunked systems in the Public Safety Pool should be required to obtain consent from existing co-channel and adjacent channel stations whose 39 dBu service contour intersects the proposed stations 19 dBu interference contour.

no base stations located more than 150 km from the proposed trunked station need be considered for the consent process.

15. In Section 90.187(b)(2)(ii) of its Rules, the FCC offers an alternative to obtaining consents:

Alternatively, applicants may submit an engineering analysis based upon generally accepted engineering practices and standards which demonstrates that the service area of the trunked system does not overlap any existing stations whose service areas overlap a circle with radius 113 km (70 mi) from the proposed base station.<sup>10</sup>

As written, this section appears to limit the consent requirement to systems that propose a contour that would overlap an existing *station*, rather than an existing station's *contour*. LMCC submits that the use of contour analyses to determine what consents may be required will not only provide more protection to incumbents, but is more in keeping with the Commission's practice for trunked stations in other bands. LMCC proposes that all "YG", or centralized trunked station, applications submitted to the Commission include either 1) an analysis showing that the interference contour (21 dBu) of the proposed station does not overlap the service contour (39 dBu) of any existing co-channel or adjacent channel station, or 2) letters of consent from all such overlapping station licensees. LMCC recommends that Section 90.187(b)(2)(ii) be redrafted to require this process. A draft of the proposed revised language for Section 90.187(b)(2)(ii) is attached to this document as Exhibit A.

16. This solution would protect all systems that might be affected by the new station regardless of their individual characteristics, while making the consent process more

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<sup>10</sup> 47 C.F.R. § 90.187(b)(2)(ii).



manageable. The LMCC does not recommend a change in the degree of adjacency, based on the bandwidth of the proposed trunked system, in which consent is required.

**B. The Number of Channels in a Centralized Trunked System Application Should Be Limited, with Applicants Allowed a Period of Time in Which to Obtain Consents to the Proposed System.**

17. As mentioned above, there is significant interest within the land mobile industry in moving forward with centralized trunking on the 450-470 MHz band. Members of the LMCC are, therefore, concerned about the supply of channels and a possible backlog of applications requesting the inclusion of large numbers of channels. The organization recommends that the FCC amend its rules to allow a maximum of ten channels in a single application for a centralized trunked system. This limit should not apply, however, in the Public Safety Pool as some large cities, counties, and states may well have a need for more than ten channels for their trunked public safety radio systems.

18. Given the requirement of obtaining consent from potentially several dozen co-channel and adjacent-channel licensees, a limitation on the number of channels in an application is reasonable. Applicants are unlikely to be able to obtain consents from all necessary licensees on a large number of channels.<sup>11</sup> Moreover, the 450-470 MHz is one of the key frequency bands available to the private wireless community and is already

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<sup>11</sup> The restriction on the number of channels also assumes that only one application from a single party in interest should be processed at a time, to avoid speculation and the potential monopolization of all available spectrum by a single entity. LMCC suggests that applicants for trunked systems should be required to certify that neither they, nor any other party with substantial ownership interest, has an unconstructed system or another pending application for a centralized trunked system in the same service area.

licensed to tens of thousands of entities on a shared basis. As the band moves toward narrowband operation and the greater efficiencies of centralized trunked systems, the LMCC is vitally interested in ensuring that it remain available to a wide variety of applicants. Further, trunking opportunities for narrowband systems must not be eliminated due to the rapid deployment of trunked systems on 25 kHz primary channels.

**C. Subsequent Applications for Channels Included in a Proposed Trunked System Only Should be Granted Subject to the Proposed System During a Reasonable Period.**

19. The LMCC contemplates that applicants will have to have begun the process of identifying co-channel and adjacent-channel licensees from which they will be required to obtain consent, prior to filing a trunked station application with a frequency coordinator. The organization's members are concerned that the inevitable discovery of such efforts by other potential applicants or licensees will lead to "greenmail"; i.e., the filing of subsequent applications for the same channels in an attempt to hinder or prevent the trunked system.

20. The LMCC therefore recommends that applicants be provided a reasonable amount of time, to be determined by coordinators, to obtain the necessary consents.<sup>12</sup> Frequency coordinators propose to electronically "flag" the limited number of "target" channels on a trunked station application for this period within their databases. During this length of time,

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<sup>12</sup> Industry discussions have centered around a period of no longer than sixty days; however, it is recognized that the period may have to be adjusted to smooth the application process as licensing goes forward. Therefore, the LMCC requests that coordinators retain the flexibility to agree upon the optimum period.

any subsequent application for the target channels would be processed and filed with the Commission conditioned upon the applicant's consent to the proposed trunked system, should the first applicant be successful in gaining the necessary consents.

21. The Commission should note that the above provision is not a ban on subsequent applications for these channels during the period in which they are flagged. Rather, the recommendation would require the same form of consensual agreement as is already required under Section 90.187(b)(2)(iii) for subsequent licensees, should the applicant be successful in obtaining the necessary consents from co-channel and adjacent channel licensees. Should the trunked station applicant be unsuccessful in obtaining the necessary consents, of course, no such agreement would be required.

22. At the end of the period, only those frequencies for which the trunked station applicant had obtained the requisite consents would be included in the application forwarded to the Commission, with consent forms attached as specified in the current rules. Software flags would be removed from remaining channels, which would then become available to other applicants. The LMCC agrees with the FCC's decision that new licensees should "only be assigned the same channel as a trunked system, if the new licensee reaches an agreement with the licensee(s) of the trunked system."<sup>13</sup>

**D. Licensees Should be Required to Construct and Place in Operation their Granted Frequencies Prior to Requesting Additional Channels, and to Notify the FCC.**

23. The LMCC believes that the above procedures will promote a more orderly

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<sup>13</sup> 47 C.F.R. § 90.187(b)(2)(iii).

transition of the 450-470 MHz band to a mix of centralized and decentralized trunked systems on both primary and narrowband offset channels. However, a restriction on the number of channels in an application is meaningless without some requirement of action by the licensee prior to its return to the Commission for more channels.

24. The FCC has eliminated nearly all of its loading requirements for trunked systems, and the LMCC does not propose that the Commission reinstate such an administratively burdensome requirement for this band. However, requiring licensees to certify to completion of construction and commencement of operation prior to the award of additional channels appears reasonable, and places some responsibility on the licensee to use its licensed frequencies efficiently. Moreover, a construction/operation requirement may discourage speculation in trunked system applications. The LMCC therefore recommends such a showing be provided prior to the processing of an application for additional "YG" authorizations by the same party in interest. As a vehicle familiar to most licensees and minimally burdensome to the Commission, the LMCC recommends the filing of Form 800 letters for this purpose.

#### **IV. Conclusion**

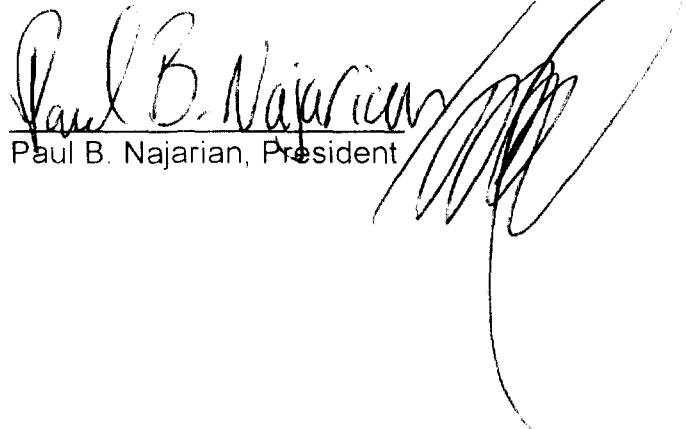
25. The advent of centralized trunked systems represents a much more efficient use of the private land mobile bands, and the LMCC applauds the FCC's decision to promote these systems. LMCC members represent nearly all of the users of the refarmed bands; they also provide them frequency coordination services. It is LMCC members that must facilitate trunked systems to advance the Commission's goal of spectrum efficiency, and

that have the most complete understanding of the ongoing licensing process on these bands. The organization respectfully requests that the FCC expeditiously act to promote trunked systems in the 450-470 MHz frequency band by amending its Rules in the manner described herein.

Respectfully Submitted,

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Paul B. Najarian, President

Date: July 22, 1998

## Exhibit A

The LMCC recommends that Section 90.187 be revised to read as follows:

**§ 90.187 Trunking in the bands between 150 and 512 MHz**

(b) \*\*\*

(2) \*\*\*

(li) Stations with service areas (37 dBu contour for stations in the 150-174 MHz band and 39 dBu contour for stations in the 421-512 MHz bands; see §90.205) that overlap the interference contour (19 dBu contour for stations in the 150-174 MHz band and 21 dBu contour for Industrial/Business Pool stations and 19 dBu for Public Safety Pool stations in the 421-512 MHz bands) of the proposed trunked station. Applicants need not seek consent from licensees of stations whose licensed coordinates are more than 150 km from the proposed trunked station. Alternatively, applicants may submit an engineering analysis based upon generally accepted engineering practices and standards which demonstrates that the interference contour of the proposed trunked system does not overlap the service area contour of any existing system.